DOCUMENT RESUME

ED 349 147 RC 018 802

AUTHOR Benson, Delwin E.; Manning, Jan
TITLE Learning Objectives for Shooting Sports Instruction. 554A: Using Measurable Criteria To Evaluate Performance.
INSTITUTION Colorado State Univ., Ft. Collins. Dept. of Fishery and Wildlife Biology.
SPONS AGENCY Extension Service (DOA), Washington, D.C.
PUB DATE Aug 91
NOTE 29p.
PUB TYPE Guides - Classroom Use - Instructional Materials (For Learner) (051) -- Guides - Classroom Use - Teaching Guides (For Teacher) (052)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adult Education; *Basic Skills; *Behavioral Objectives; Curriculum Guides; Elementary Secondary Education; *Outdoor Activities; Outdoor Education; *Safety
IDENTIFIERS *Shooting Sports

ABSTRACT

This publication contains objectives that range from basic shooting sports safety and proficiency to more specialized activities. They can be applied to hunter safety education, 4-H shooting sports, scouting, and club or community activities for youth or adults. The specific learning objectives in each list have been grouped into learning priorities. Where applicable, safety is the first priority, followed by basic skills and knowledge, advanced skills and knowledge, and master skills and knowledge. The publication is organized into lists of objectives for each of the following subjects: (1) archery; (2) black powder; (3) decoy carving; (4) gunsmithing; (5) handgun; (6) hunting; (7) hunting dogs; (8) reloading; (9) rifle/airgun; (10) shotgun; (11) taxidermy; and (12) wildlife photography. Each list contains from 19-43 objectives and includes an instructor reference. Directions are given for instructors to add their own objectives to the lists. The document contains illustrations. (KS)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

RC

ED349147

LEARNING OBJECTIVES FOR SHOOTING SPORTS INSTRUCTION

554A
using measurable criteria
to evaluate performance

Colorado State University Cooperative Extension

RC018802

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

Authors

Delwin E. Benson, Ph.D., Professor and Cooperative Extension Wildlife Specialist, Colorado State University, Fort Collins, Colorado
- Certified Firearms Training Counselor
- Certified Hunter Education Instructor

Jan Manning, Fort Collins, Colorado
- Certified Hunter Education Instructor
- Certified Firearms Instructor

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Milan A. Rewerts, interim director of Cooperative Extension, Colorado State University, Fort Collins, Colorado. Cooperative Extension programs are available to all without discrimination. To simplify technical terminology, trade names of products and equipment occasionally will be used. No endorsement of products named is intended nor is criticism implied of products not mentioned.

500 8/91

Learning Objectives For Shooting Sports Instruction

554A
using measurable criteria
to evaluate performance

Cooperative Extension
Department of Fishery and Wildlife Biology
Colorado State University
Fort Collins, Colorado 80523
August 1991

Table of Contents

Why Use Learning and Performance Objectives? 1

Subject Objectives 2
- Archery 3
- Black Powder Shooting 5
- Decoy Carving 7
- Gunsmithing 9
- Handgun 10
- Hunting 12
- Hunting Dogs 14
- Reloading 16
- Rifle/Airgun 18
- Shotgun 20
- Taxidermy 22
- Wildlife Photography 23

Why Use Learning and Performance Objectives?

The goal of education is learning. Instructors must decide about the content of subjects to teach and the best methods to teach in the available time. When all goes well, students learn and their behavior is changed. They perform differently with new knowledge, new skills and new attitudes.

A problem with education is that instructors may not know whether learning takes place. In fact, many instructors incorrectly focus their planning upon what they want to teach, not what students are expected to learn. Essentially, there are no clear learning destinations, no clear outcomes, no performance objectives. Information is merely given and assumed to be received and used. Tests are often the only tools used to examine whether information was received sufficiently enough to be repeated or integrated into the behavior of learners. Testing is appropriate, but can be enhanced when both instructors and students know the expectations that we call learning and performance objectives.

Learning and performance objectives are recommended for use as the basis of conducting shooting sports programs. They provide specific mechanisms for planning and communicating learning expectations. Evaluation criteria are built into the statements. This publication contains objectives that range from basic shooting sports safety and proficiency to more specialized activities. They can be applied to hunter safety education, 4-H shooting sports, scouting, and club or community activities for youth or adults.

The specific learning objectives in each list have been grouped into learning priorities. Where applicable, safety is the first priority, followed by basic skills and knowledge, advanced skills and knowledge, and master skills and knowledge. By establishing priorities to the learning objectives, students form an orderly progression of thought and action for learning.

This publication may not meet the specific needs of your program; therefore instructions to write your own objectives are provided. Remember first, objectives must be clear statements that communicate what is expected of the student. They are not statements about what instructors plan to teach. Start your objectives with the phrase "the student will be able to . . . " and that should place you in the correct frame of mind to think as students must think.

Good objectives should have three components and an example of each is provided as follows:

1. What are students to learn? *Students will be able to demonstrate basic marksmanship skills by shooting 10 shots...*
2. Under what conditions? *...from the prone position at 20 yards...*
3. At what level of performance? *...and score 5 of 10 shots in the 10 ring.*

When the objective is put together, one sees that "the students will be able to demonstrate basic marksmanship skills by shooting 10 shots from the prone position at 20 yards and score 5 of 10 shots in the 10 ring." Generally, objectives vary based upon the knowledge, skills and attitudes of students. This objective may be too difficult or too easy for a specific student; therefore objectives are made to be changed.

Objectives that follow can guide students and instructors toward understandable accomplishments. You may wish to add special conditions of performance and levels of performance to the statements so your needs will be met. Good luck with planning, conducting, evaluating, and having fun with shooting sports.

Subject Objectives

Our selection of subjects and objectives relate to shooting, hunting and activities that complement the shooting sports. Each student's subject may be different, depending on their age, interests, available facilities and time. Because of the vast latitude available in shooting sports activities, it is necessary to establish requirements on an individual basis. These objectives may be used in any order or combination to assist in learning. This also allows students to follow their interests at their own pace. It will be quite likely that many students will work in the same subject areas (rifle or archery) but at different skill levels. At the same time, they may work on individual subject areas (hunting or gunsmithing) where no two students work on the same subjects.

Each subject has its own list of recommended objectives. Instructors and students can add their own subjects and objectives if the following subjects are not adequate for the needs of learners and instructors.

Archery
Black powder
Decoy carving
Gunsmithing
Handgun
Hunting
Hunting dogs
Reloading
Rifle
Shotgun
Taxidermy
Wildlife photography

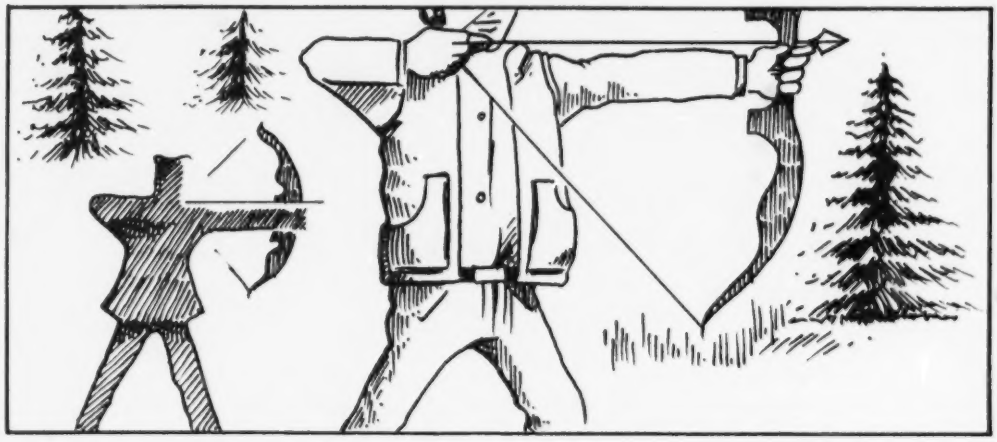
For some subjects there are recognized standards of skill that are used as objectives. An example of this would be the NRA Junior Marksmanship program that provides national levels of shooting achievement. An appropriate objective might be to accomplish the "NRA Sharpshooter" level within the year. In other subject areas, there are no established objectives, so objectives must be determined by students and instructors. An example of this might be -- in taxidermy -- to mount one game bird and one small game mammal in a year.

At the end of some subjects, reference is made to *Advanced Hunter Education and Shooting Sports Responsibility* by D. E. Benson and R. E. Richardson. This 266-page manual of lesson plans is designed for instructors and was published by Colorado State University. It is available from the Division of Continuing Education, Spruce Hall, Colorado State University, Fort Collins, CO 80523.

ARCHERY

What You Can Learn:

- *How to select archery equipment*
- *Care of your equipment*
- *How to make arrows*
- *How to improve your shooting*



Archery is unique among the shooting sports. It requires different kinds of coordination, strength and most importantly, a different kind of approach. Its history disappears into the mists of time, and draws images of Robin Hood and American Indians. In addition, archery is a serious sport, and is practiced in the Olympic games.

Students will be able to:

Basic Safety

1. Demonstrate the safe stringing and unstringing of a recurve bow.
2. List the considerations necessary for safe shooting on a formal archery range and under field conditions.
3. Define the word "spine" as it relates to arrows and explain its effects on safe, accurate shooting of a bow.
4. Demonstrate safe field carries with a bow.
5. Demonstrate two safe methods of crossing a fence (alone and with another person) when using a bow.
6. Describe two safe methods to carry and to store arrows.
7. Describe the proper technique for getting into and out of a tree stand with a bow.
8. Design a logbook to record your progress in archery. Make entries in this logbook of each shooting session for the duration of your project.
9. Make a chart that shows the advantages and disadvantages of three types of quiver.

Basic Skills and Knowledge

10. Identify and label the major parts of a recurve bow and a compound bow on a line drawing.
11. Label the major parts of both a target and a hunting arrow on a line drawing or photograph.
12. Describe two methods of sighting a bow, and explain the advantages and disadvantages of each. Shoot instinctively and with sights, then compare your results. Explain to your instructor the benefits of both styles of aiming. Make a chart that compares instinctive sighting to the use of a bow sight. List advantages and disadvantages of each.
13. Clearly explain proper release of the string and its importance in accurate shooting of a bow.
14. Identify four types of arrow points used in target archery and hunting and describe the specific uses of each.
15. Demonstrate their understanding of basic shooting principles by shooting a 10 shot group at a distance and with a bow selected by the instructor.
16. Keep a record of your activities.
17. Make a chart that shows the advantages and disadvantages of a long bow, a recurve bow and a compound bow.
18. Describe to your instructor what "brace height" is and why it is important to archery.
19. Demonstrate to your instructor the process of checking a wood arrow for flaws or cracks. Be able to explain why this is important and the possible dangers it exposes.
20. Show in your logbook that you are able to average 50 percent of the possible target score at two distances with two flights of arrows for four courses of fire.
21. Make a checklist and gather the materials you would want to have in a kit for basic maintenance of archery equipment.

22. Describe to your instructor two anchor points, their advantages and disadvantages and uses under field and range conditions. Demonstrate proper draw technique to reach these anchor points. Explain why correct draw is important.
23. Demonstrate for your instructor the proper stance for accurate shooting of a bow. Demonstrate and describe how to find your "natural point-of-aim."
24. Describe to your instructor what a "knocking point" is and why it is important to archery.
25. Describe to your instructor "draw weight" and its importance to archery.

Advanced Skills and Knowledge

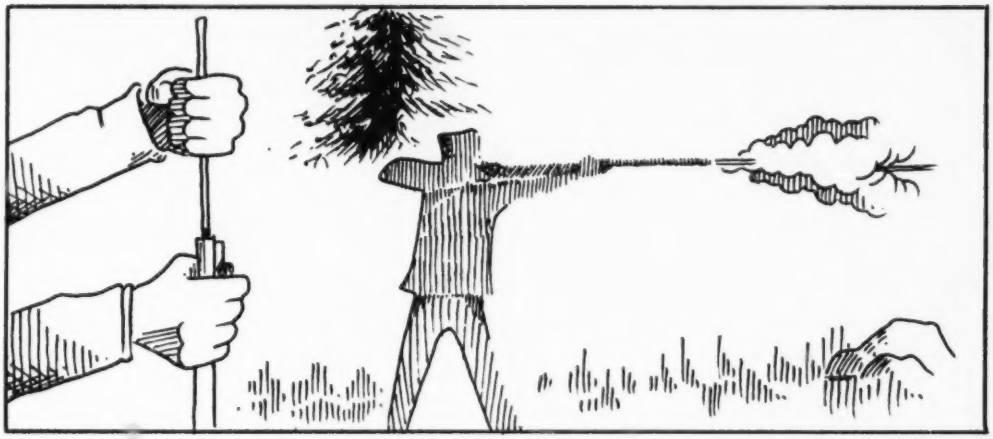
26. Show in your logbook that you are able to average 65 percent at two distances with two flights of arrows for eight courses of fire.
27. Describe to your instructor the process of fletching an arrow.
28. Make a chart that compares the advantages and disadvantages of arrow materials.
29. Show in your logbook that you are able to average 75 percent at two distances with two flights of arrows for 12 courses of fire.
30. Describe for your instructor the use of a "stabilizer" and how it aids accuracy.
31. Participate in a local archery competition not associated with your regular activities. Write a report that describes the competition and your performance.
32. Show in your logbook that you are able to average 80 percent at two distances with two flights of arrows for 20 courses of fire.
33. Write a report about the development and evolution of the bow.
34. Make a dozen arrows matched to your bow.
35. Make a chart that compares modern archery equipment and techniques to those of American Indians or a historical group of archers of your choice.
36. Draw a design for a field archery course. Label the targets, distances, backstops and safety elements.
37. Shoot on a field archery course. Record your scores in your archery logbook. If possible, shoot there often enough to demonstrate your skill development in field archery by improved scores.

Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Unit XII, lessons 38,39,40.

Black Powder Shooting

What You Can Learn:
- *Firearm history*
- *How to build a muzzleloading firearm*
- *How to load and shoot a muzzleloading firearm*



The sport of modern muzzleloading is one that catches many people's imagination.The history attached to these firearms spans the whole founding and expansion of the United States.

Today there is an active muzzleloading organization in every state and many states have special hunting seasons reserved for muzzleloading firearms only. Shooting black powder firearms is fun and can be very effective for hunting and target shooting.

Students will be able to:

Basic Safety

1. Obtain and use adequate eye and hearing protection. They will be able to explain the importance of this protection in shooting sports activities.
2. List five major safety points in black powder shooting.
3. Demonstrate to your instructor how to determine that a muzzleloader is unloaded.
4. List and explain the steps in loading a muzzleloading rifle with a patched round ball.
5. Demonstrate to your instructor how to determine the correct powder charge for a new muzzleloading rifle.
6. Under the supervision of your instructor, demonstrate the loading of a muzzleloading rifle. Fire the shots you load.
7. Describe to your instructor the function of a set trigger.

Basic Skills

8. Keep a record of your muzzleloading activities.
9. Diagram the major internal and external parts of a lock. Label the various parts.
10. Have a checklist of the supplies and equipment you need for a day's shooting of a muzzleloader. Assemble these supplies and equipment for your instructor.
11. Demonstrate to your instructor the process of cleaning a muzzleloading rifle.
12. Make a chart that compares the advantages and disadvantages of round balls and conic bullets.
13. Make a logbook that shows your performance in shooting a muzzleloader. Maintain your logbook for the duration of this project.
14. Show in your shooting logbook that you are able to group five shots in a 6-inch circle at 25 yards three times in a row from a rest.

Advanced Skills and Knowledge

15. Maintain a collection of fired patches. Label them by condition and any problems they may indicate. Describe in writing what you would do to correct any problems they might indicate.
16. Under the supervision of your instructor, demonstrate the process of loading a percussion revolver. Fire the shots you load.
17. Show in your shooting logbook that you are able to group five shots in a 6-inch circle offhand at 25 yards three times in a row.
18. Make a powderhorn. Write a description of the process. Illustrate your report with drawings or photographs.
19. Make a list of "primitive" targets you would like to use at a muzzleloading shoot. List the supplies you need, the sources of these supplies and the ap-

proximate time necessary to construct these targets.

20. Go on a muzzleloading hunt. Write a report of your hunt. Include the location of the hunt, weather, type of terrain, game seen, game taken, etc. If possible, illustrate with photographs.
21. Show in your shooting logbook that you are able to group five shots in an 8-inch circle offhand at 50 yards three times in a row.
22. Make a shooting bag. Record the process.
23. Write a report on the development of muzzleloaders from the first known guns to the end of the percussion period.
24. Under the supervision of your instructor, demonstrate the procedure of loading a muzzleloading shotgun. Fire the shots you load.
25. Attend a local muzzleloading shoot that is not a regular activity of your program. Write a report on the activities at the shoot. If you participate in the shoot, describe your own performance. Explain your plans to improve your performance.
26. Build a muzzleloader from a kit. Keep a separate log of the time spent building it and the costs you incur.
27. Attend a black powder "Rendezvous." Write an article on your experiences there.
28. Make a muzzleloader from component parts. Maintain a logbook of your time and expenses. Illustrate with photographs if possible.

Instructor References

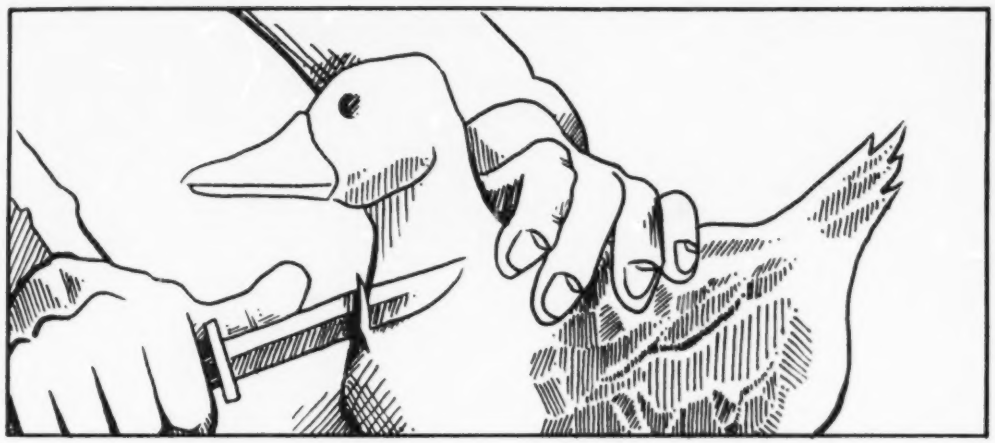
Advanced Hunter Education and Shooting Sports Responsibility Unit XII, lesson 41.

11

Decoy Carving

What You Can Learn:

- *Waterfowl Identification*
- *Wood Working*
- *Sculpture*
- *Painting*
- *Use of Decoys*



American waterfowl decoys have a fascinating history. There are examples of decoys made by pre-historic Indians that are well over 1000 years old. During the era of extensive market hunting in the 19th century, many thousands of wooden decoys were used as everyday tools by East Coast market hunters. Today their decoys are highly prized as collectable early American art. Decoys are almost as important to today's waterfowl hunters as their shotguns. Making your own decoys can be a pleasant hobby and can improve your hunting success.

Students will be able to:

Basic Skills and Knowledge

1. Keep a record of your decoy carving activities.
2. Make a checklist of the tools you need for decoy carving. Indicate on this checklist any tools you may acquire.
3. List literature and books useful to a decoy carver. Indicate any of these you may acquire.
4. Develop, for your project, a reference album of waterfowl photographs. These may be photographs you take yourself or photographs and illustrations taken from magazines or other sources.
5. Identify 10 local species of waterfowl from photographs.
6. Make a chart of the differences between puddle ducks and divers as they pertain to decoy carving.
7. Make a chart that compares the three major types of decoy carving (working decoy, decorative decoy, bird sculpture).
8. Draw a full size set of plans for a working decoy you would like to carve.
9. Make a checklist of the materials necessary to carve a decoy of your choice. Include the price of the materials and a source from which to obtain them.
10. Demonstrate, for your instructor, the proper way to sharpen carving tools. Be able to demonstrate and describe the method you use to determine when they are sharp.
11. Carve the heads of three species of ducks in soap or wood. Be able to explain the distinguishing characteristics of each.
12. Carve a working decoy for a species of waterfowl of your choice.
13. Make a logbook to record your progress in carving a decoy. Include the time you spend, difficulties you encounter and how you correct them. You may want to include photographs of your progress.
14. Paint your decoy. Record the process you use.
15. Explain to your instructor the characteristics of design that makes a working decoy "float worthy."
16. Write a report on the development of carved decoys and the materials used to make decoys.
17. Illustrate three types of decoy anchors. Include a chart comparing their advantages and disadvantages.

Advanced Skills and Knowledge

18. Attend a decoy carver's show or an exhibit of carved decoys. Write a report on the show or exhibit. Describe the different styles by different carvers. If possible, illustrate your observations with photographs.
19. Explain to your instructor about "confidence" decoys and their use.

20. Draw a full-size set of plans for a decorative decoy you would like to carve.
21. Carve a decorative decoy for a species of your choice. Record your progress.
22. Paint your decoy. Record the process you use.
23. Enter your decoy in a decoy show.
24. Make a chart of various materials used to carve decoys. Compare their advantages and disadvantages for working, decorative and sculpture decoys.

Master Skills and Knowledge

25. Choose a local hunting area for ducks. Diagram where you would locate your blind and where you would set your decoys. Describe how you might vary the set with a change in the wind.
26. Draw a full-size set of plans for a waterfowl sculpture.
27. Carve a waterfowl sculpture for a species of your choice.
28. Paint your sculpture.
29. Enter your sculpture in a decoy show.

13

GUNSMITHING

What You Can Learn:

- *Proper maintenance of firearms*
- *How to refinish a gun stock*
- *How to install recoil pads*
- *How to checker a gun stock*
- *How to blue a firearm*
- *How to build a custom rifle*

Gunsmithing is an active, hands-on project that allows you the opportunity to learn actual gunsmithing skills. By working with an experienced adult you can learn the techniques and procedures used every day by professional gunsmiths. Maintaining records of your activities helps you visualize your own progress, and show you the time and economics of the gunsmithing profession.

Students will be able to:

Basic Safety

1. Under the supervision of a gunsmith, take down, clean, lubricate and reassemble a firearm.
2. Keep a record of your gunsmithing activities.
3. With your instructor choose three other gunsmithing tasks. Illustrate or write a summary to describe these activities in a record book.
4. With your instructor choose four other gunsmithing tasks to perform. Illustrate or write a summary to describe these in a record book. Visit a working gunsmith. Make a list of 20 common gunsmithing jobs.
5. With your instructor choose four other gunsmithing tasks for you to perform. Illustrate or write a summary to describe these in your record book.
6. Write a report on the process of tuning and timing a revolver.
7. With your instructor choose four other gunsmithing tasks. Illustrate or write a summary to describe these in your record book.

Basic Skills and Knowledge

8. Have a checklist of necessary hand tools for basic gunsmithing. Indicate on this checklist any of these you acquire.
9. List literature and books useful to a gunsmith. Indicate any of these you acquire.
10. With your instructor choose two other simple gunsmithing tasks. Photograph or otherwise describe these processes.
11. Choose three common gunsmithing jobs and list, in your record book, the steps involved and the tools required to perform them.
12. Refinish a gunstock. Photograph or illustrate the steps you use.
13. Install swivel mounts on a firearm. Photograph or illustrate the steps you use.
14. Install a recoil pad on a firearm. Photograph or illustrate the steps you use.
15. Install new sights on a firearm. Photograph or illustrate the steps you use.
16. Glass bed a rifle action and write the steps of this procedure.

Advanced Skills and Knowledge

17. Make and install a wood or metal inlay on a gunstock. Photograph or illustrate the procedure.
18. Make a checkering cradle. Photograph or illustrate the process.
19. Refresh the checkering on a gunstock or checker a gunstock. Photograph the procedure.
20. Write a report on the process of bluing a firearm and/or blue a firearm.
21. Restock a rifle or shotgun using a precarved stock blank. Photograph the procedure.

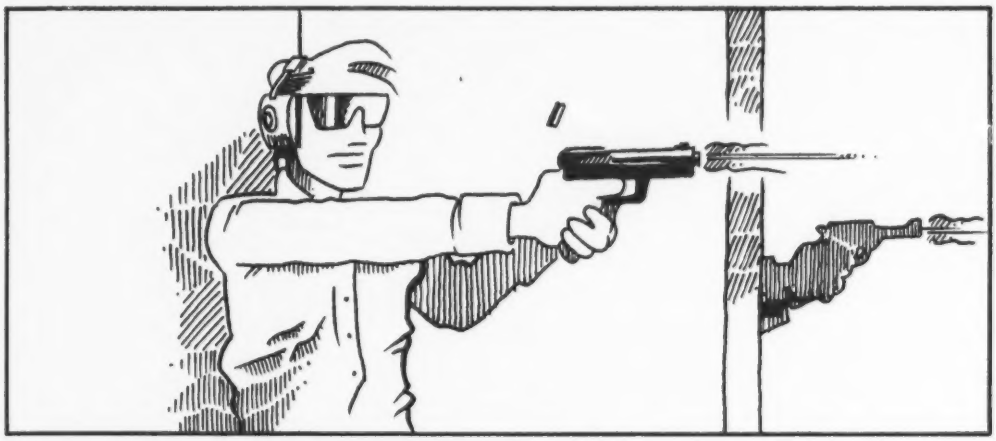
Master Skills and Knowledge

22. Build a custom rifle from component parts. Keep a logbook that describes the process and the time spent.

HANDGUN

What You Can Learn:

- *Proper handgun safety*
- *Care of handguns*
- *Proper handgun marksmanship*
- *How to select a handgun for different uses*



Handguns are a popular and exciting segment of the shooting sports. Handguns have an important place in hunting, recreation, formal marksmanship, and police service. Safety is stressed because of the special safety requirements inherent in the use of handguns.

Take the opportunity to learn about the different types of handguns, their various merits and shortcomings, and the care of your handgun.

Students will be able to:

Basic Safety

1. Obtain and use adequate eye and hearing protection. They will be able to explain the importance of this protection in shooting sports activities.
2. List four safety problems concerning handgun use. Suggest at least two possible ways to avoid these safety problems.
3. Demonstrate for your instructor the correct methods of examining a single-action revolver, double-action revolver and semi-automatic pistol to determine that they are unloaded.
4. Describe, to your instructor, the proper methods to safely store a handgun in the home. Include any considerations that especially apply to handguns.
5. Demonstrate, for your instructor, the correct procedures for cleaning revolvers and pistols.
6. Illustrate at least five safe ways to carry a handgun in the field. You may use drawings, photographs, or illustrations from magazines.

Basic Skills

7. Keep a record of your handgun activities.
8. Prepare a chart that compares the function, uses, advantages and disadvantages of single and double action revolvers and semi-automatic pistols.
9. Demonstrate, for your instructor, correct stance in both the one and two-hand positions of handgun shooting.
10. Describe and demonstrate for your instructor how to determine "natural point-of-aim" with a handgun. Be able to explain its importance in handgun marksmanship. Explain how breath control is important to aiming.
11. Draw several illustrations that show correct and incorrect sight alignment and sight pictures in handgun marksmanship.
12. Write a report on trigger control as it pertains to handgun marksmanship. Include how it can help you diagnose accuracy problems.
13. Describe, to your instructor the term "follow through" as it pertains to shooting a handgun. Be able to explain its importance in accurate shooting.
14. Demonstrate, for your instructor, four handgun shooting positions. Describe the advantages, disadvantages and uses of each position.
15. Determine, with your instructor a reasonable range and position, then shoot for the best possible five-shot group with a handgun. Shoot at least three groups.

Advanced Skills and Knowledge

16. Attend a handgun competition. Write a report on the event. You may want to illustrate this report with photographs.
17. Shoot your handgun for score. Demonstrate that you can maintain a score of at least 50 percent on three targets at a

distance determined by your instructor.

18. Design a shooting logbook to record your progress in shooting a handgun. Maintain the records of your shooting in this logbook for the duration of this project.
19. Shoot your handgun for score. Demonstrate that you can maintain a score of at least 65 percent on three targets at a distance determined by your instructor.
20. Summarize your state's regulations concerning hunting with a handgun. Include the species that may be harvested with a handgun and any special requirements that pertain to hunting them with a handgun.
21. Shoot your handgun for score. Demonstrate that you can maintain a score of at least 75 percent on three targets at a distance determined by your instructor.

Master Skills and Knowledge

22. Choose a handgun competition that interests you and write a summary of it for your record book. Include an outline of the rules, the targets used, what type of equipment is necessary and anything else you think is of interest.
23. Shoot your handgun for score. Demonstrate that you can maintain a score of at least 85 percent on three targets at a distance determined by your instructor.

Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Unit VI.

HUNTING

What You Can Learn:

- *How to choose the proper firearm for hunting*
- *How to hunt big game*
- *How to hunt small game*
- *How to hunt waterfowl*
- *How to call wild animals*

Hunting is a great tradition. For most of our history citizens depended on some level of hunting for food. While most people today do not depend on hunting for survival, millions venture in the field each fall for sport and recreation.

It is important to note that hunters always have been at the forefront of efforts to protect our wildlife and natural resources. Hunters provide most of the funds for conservation activities. Not one wildlife species has become extinct by regulated sport hunting.

Students will be able to:

Basic Safety

1. Successfully complete a hunter education course.
2. Illustrate safe and unsafe backstops in hunting situations. Give at least five examples of each. Use photographs or illustrations from magazines.
3. Make a checklist and gather materials, to be evaluated by your instructor, fora first aid kit you would take on a hunt.

Basic Skills and Knowledge

4. Keep a record of your hunting activities.
5. Record the habitat requirements of one local small game animal, large game animal and game bird. Include requirements for food, shelter and water.
6. Describe the firearm you would choose to hunt a small game species and explain why.
7. Be able to identify three small game animals and five game birds from photographs selected by your instructor.
8. List at least five ways to show respect for landowners.
9. Go on a small game hunt. Write a story of your hunt. Include details such as weather, location, signs of game and techniques used.
10. Take a trip to identify and photograph five land uses that are detrimental to wildlife. Be able to explain why they are detrimental.
11. Take a trip to identify and photograph five land uses beneficial to wildlife. Be able to explain why they are beneficial.
12. Make a checklist and gather materials, to be evaluated by your instructor, of the equipment you would take on a one-day hunt for a game animal you select.
13. Describe to your instructor, the tools you need and the procedures to field dress a small game animal, game bird and big game mammal.
14. Make a chart to compare the advantages and disadvantages of various types of sights for hunting.
15. Identify five local species of waterfowl from photographs.
16. Design a logbook for your hunting trips to record information like location, weather, techniques used, species and numbers of game seen and taken. Include all information you feel would be important in the future to plan your hunt.
17. Use your logbook to record all the hunts you take over a year.
18. Explain to your instructor what you would do if you found recently killed or injured livestock on private property where you have permission to hunt.
19. Make a checklist of the equipment necessary to properly butcher a big game animal for the freezer.

20. Prepare a menu, with recipes, for a game dinner.
21. Describe to your instructor (or in writing) the techniques and reasons for using "stand hunting," "still hunting," "stalking," and "drive hunting."
22. Explain to your instructor what caliber of rifle you would use for a big game hunt of your choice and justify your choice.
23. Make a checklist and gather the materials for items you would carry on your person in a survival kit for a big game hunt in the mountains. Explain what you might change in your kit for a day long waterfowl hunt in sub-zero weather along a river.
24. Explain to your instructor what type and weight bullet you would use for two types of big game. Justify your answer.
25. Describe to your instructor the shotgun chokes and shot sizes you would use on a goose hunt and a quail hunt. Be able to justify your choices.
26. Demonstrate for your instructor the proper techniques of sharpening a hunting knife. Demonstrate and explain how you determine that it is sharp.
27. Review a summary of hunting regulations for big game and waterfowl. Outline in your record book the important categories of law and why they are important.

Advanced Skills and Knowledge

28. Write a report on the habitat needs of one species of game animal not found in your state.
29. Have an interview with the local district wildlife manager about the three most common game law violations in your area. Write a report that describes and suggests ways to reduce them.
30. Demonstrate the use of a map and compass by laying out a compass course of at least five legs. Have the course verified by your instructor.
31. Demonstrate how to set decoys for local waterfowl hunting conditions. Be able to explain your choice of location, decoy placement and blind location.
32. Demonstrate to your instructor that you can identify the tracks and direction of movement of four species of game bird or mammal under field conditions.
33. Demonstrate the technique of orienting a map to local topographical features and locate your position on the map by triangulation.
34. Choose a species of game bird or animal that can be called, and successfully call that species close enough to bag or photograph.
35. Demonstrate range estimation to plus or minus 10 percent on three objects, chosen by your instructor, each at near and far range.
36. Demonstrate to your instructor that you can follow a milk and food coloring "blood" trail of at least 200 yards length under field conditions.
37. Go on a big game hunt. Keep a logbook of the events of the hunt.
38. Write a story that explains what you would do if an animal you wounded escaped onto private property where you did not have permission to hunt.

Master Skills and Knowledge

39. Visit a local taxidermist. Make outlines of the proper field techniques for preparing game birds and big game animals for mounting.
40. Visit a local hunting dog trainer. Write a report on training methods for obedience and hunting, and/or different techniques for training pointers and retrievers.
41. Under the direction of your local district wildlife manager, participate in an activity for wildlife management or habitat improvement. Photograph the project.
42. Attend a meeting of your state's wildlife agency. Write a report on the meeting.
43. Write the game department of another state for their hunting regulations. Write out the plans you would make for a hunt you would like to make in that state. Outline the entire hunt or make a chart that compares the similarities and differences in hunting regulations between that state and your state.

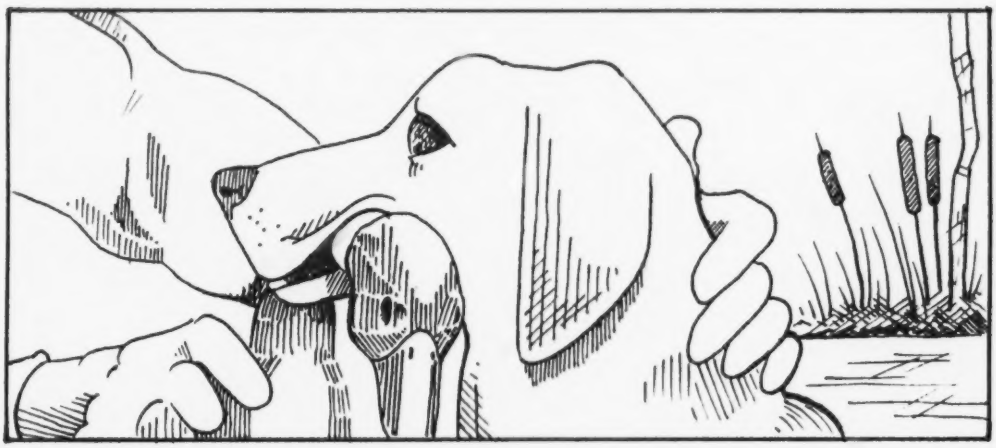
Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Units X, XI, XII.

HUNTING DOGS

What You Can Learn:

- *Which hunting dog is best for you*
- *How to choose a puppy*
- *How to train your pup to hunt*
- *How to care for your dog*



Humans and dogs hunted together before written history. Work and rewards are shared in a unique partnership.

A good dog improves the chance of success in the field and is a valuable conservation tool. A dog reduces the chance of a wounded bird escaping and allows the hunter to get closer before the flush. A well-trained dog is a hunter's best companion in the field.

Because bird dogs usually are trained individually, this project is directed mainly to them. Dogs that hunt in packs, such as rabbit, bear and lion dogs also can be used in the project, but you should consult with your parents and instructor before starting a project with these type of hunting dogs.

Students will be able to:

Basic Skills and Knowledge

1. Keep records of your dog training activities.
2. Write a report on two types of hunting dogs that you feel might be suited to the types of hunting you intend to do.
3. Attend a field trial. Write a report about the field trial, with emphasis on the performance of various breeds of dogs.
4. Visit a trainer in your area who works with the breeds of dogs that interest you. Write out a list of questions to ask the trainer to help you choose a puppy to train. Include the list and the trainer's answers in your record book.
5. Prepare a list of the equipment you need to care for and train your dog. Indicate on your list any of these you obtain.
6. Visit a veterinarian to discuss health care and problems which may concern hunting dogs (hips, eyes, feet, etc.) Write a report that lists the points of importance to watch for when choosing a pup.

Advanced Skills and Knowledge

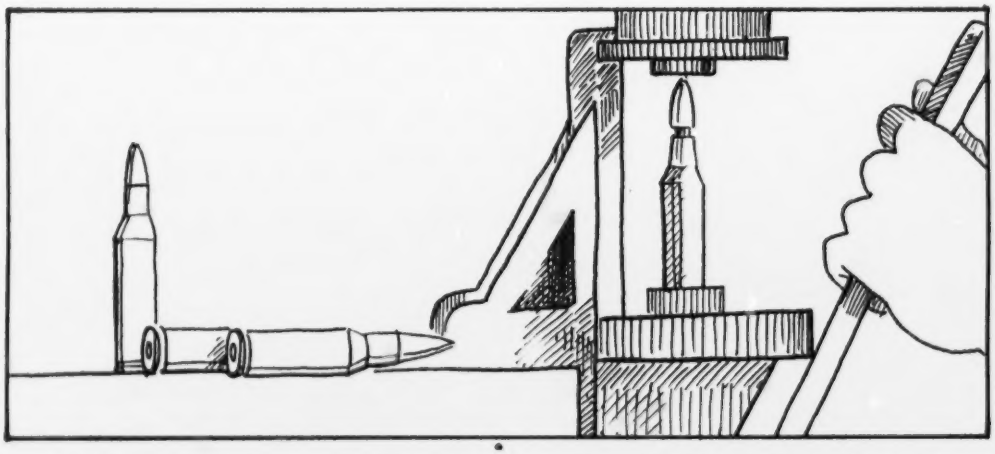
7. Choose a pup to train. Prepare a report that includes where you obtained your pup, any pedigree or registration information and any health information you received with your pup.
8. Outline a training program for your dog. Include a tentative schedule of objectives to gauge your dog's progress.
9. Prepare a health record for your dog. Include a schedule of vaccinations and wormings. A diet outline could be included in this health record.
10. Demonstrate to your instructor your dog's training progress compared to our training schedule.
11. Enter your dog in an obedience class at a dog show.
12. Enter your dog in the appropriate class in a field trial. Write a report on your dog's performance. Be sure to include an assessment of behaviors where your dog needs more training.
13. Take your dog hunting. Write a report on the hunt and your dog's performance.
14. Demonstrate to your instructor your dog's training progress compared to your training schedule.
15. Prepare a record book of the hunts you and your dog take. Include everything you feel will help you to evaluate your dog's performance in the field. Maintain this record for the duration of the hunting season.
16. Demonstrate to your instructor your dog's training progress compared to your training schedule.

17. Enter your dog in the appropriate class in a field trial. Write a report on your dog's performance. Be sure to include an assessment of areas where your dog needs more training.
18. Arrange for a demonstration of hunting dogs for your club.
19. Attend a regional or national field trial event.

RELOADING

What You Can Learn:

- *How to choose components*
- *How to develop the best load*
- *How to safely handle ammunition*



Reloading your own ammunition is one of the most satisfying activities in the shooting sports. It allows you wide control over the performance of your firearm and saves a significant amount of money over the cost of factory ammunition. There is a great deal of pleasure in developing the best load for your firearm to hunt with or for the most accurate target load. Safety is a paramount concern.

Students will be able to:

Basic Safety Skills

1. Describe for your instructor safe methods of storage for gunpowder and primers.
2. List ten major points of safety in reloading.
3. Make a logbook in which you record your reloading data. Be able to explain why you chose the information you include. Information on the performance of your ammunition should be part of this log.
4. Describe for your instructor the differences between black and nitro-based powders.
5. Explain to your instructor the differences between powders intended for use in shotshells with those intended for use in rifle cartridges.
6. Describe to your instructor three signs of excess pressure in reloaded ammunition.
7. Demonstrate to your instructor that you can uniformly measure 20 duplicate powder charges.

Basic Skills and Knowledge

8. Keep a record of your reloading activities.
9. Diagram the steps in reloading a centerfire rifle cartridge.
10. Make a checklist of the equipment necessary for reloading metallic fixed ammunition. Indicate any equipment you acquire on your checklist.
11. Make a chart that compares three granulation types of nitro powders for reloading.
12. Draw pictures of boxer and Berdan primers. Be able to explain the difference between corrosive and non-corrosive priming.
13. Diagram the steps in reloading a shotshell.
14. Develop a load for a shotgun of your choice, start with published reloading data. Be able to explain to your instructor the method you intend to use to develop this load. Write a report on the testing process you use. Describe any modifications you make in the load and why you made them.
15. Demonstrate, for your instructor, the reloading of a fired rifle or pistol case.

Advanced Skills and Knowledge

16. Develop a load for a rifle of your choice, start with published reloading data. Be able to explain to your instructor the method you intend to use to develop this load. Write a report on the testing process you use. Describe any modifications you make in the load and why you made them.
17. Demonstrate to your instructor the process of annealing metallic cartridge cases. Be able to explain the purpose of this process as it relates to reloading.
18. Describe for your instructor the difference between neck sizing and resizing. Be able to explain how each is used in reloading.

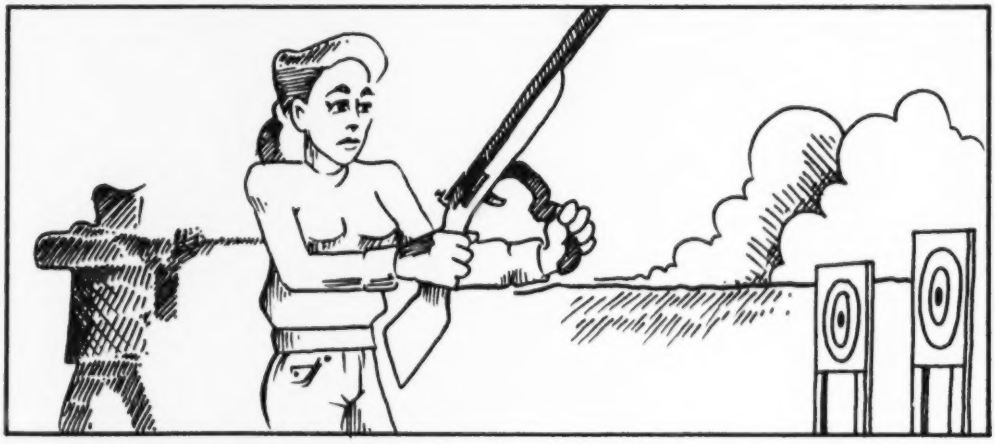
19. Make a display board of various bullet designs. Be able to explain the advantages and use of each design.
20. Describe to your instructor one method of removing a stuck case from a resizing die.
21. Write a report on C.U.P. Define it, indicate how it is measured and explain its importance to reloading.
22. Make a display, or diagram on the process of case forming. Explain each step.

Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Unit IV.

RIFLE/AIRGUN

What You Can Learn:
- *Selection and care of rifles*
- *Firearms history*
- *Marksmanship*



Marksmanship is one of the most challenging aspects of shooting sports. It offers great opportunity for anyone willing to take the time and effort to accept the challenge. Marksmanship requires coordination, concentration and desire. With these skills, any shooter, male or female, can learn to excel in the shooting sports. Many opportunities can be found to achieve as high a goal as you choose, perhaps even to represent your country in the Olympic Games. But best of all, shooting is fun, no matter what your level of skill.

Students will be able to:

Basic Safety

1. Demonstrate correct, safe firearms handling techniques with long guns, including muzzle control while passing a firearm to another person, casing and uncasing a firearm and placing and removing a firearm from a vehicle.
2. Demonstrate the location and the functional position of the safety on each of three different long guns.
3. Safely determine that each of five action types of long guns is unloaded.
4. Demonstrate how to determine the correct cartridge to use with two different long guns.
5. Demonstrate four safe field carries with a long gun.
6. Demonstrate two safe methods of crossing a fence (alone and with another person) with a long gun.
7. Demonstrate basic firearm maintenance, cleaning and storage for a long gun.
8. Obtain and use adequate eye and hearing protection. Explain the importance of this protection in shooting sports activities.
9. Explain to your instructor three safety points associated with air guns.

Basic Skills and Knowledge

10. Identify and label the major parts of a rifle on a line drawing, including: the muzzle, barrel, breech, chamber, receiver, bolt, trigger, trigger guard, safety, stock, forearm, butt of stock, comb of stock, and the group of parts called the action.
11. Clearly explain the sequence of events that take place inside a cartridge when it is fired.
12. Describe four major differences between a rifle and a shotgun.
13. Identify your master eye and explain the significance of shooting with both eyes open.
14. Draw correct sight pictures for open and aperture rear sights and explain the advantages and disadvantages of each.
15. Explain proper trigger control and its importance to effective shooting technique.
16. Describe a safe backstop for firearms under both range and field shooting conditions.
17. Students will memorize the acronym BRASS and the meaning of each letter for proper shooting.
    Breathing
    Relaxation
    Aiming
    Squeeze the trigger
    Squeeze some more (follow through)
18. Students will demonstrate their understanding of basic shooting principles by shooting a 10-shot group at a distance

and with a firearm selected by the instructor.

19. Describe proper storage of firearms and ammunition in the home.
20. Describe the basic procedure for sighting in a rifle and be able to describe the sight adjustment necessary on two problem targets.
21. Define the term caliber and describe how it is measured.
22. Describe to your instructor three kinds of air gun actions or designs. Include similarities and differences.
23. Keep a record of your rifle/airgun activities.
24. Make a chart that compares the advantages and disadvantages of bolt, lever and semi-auto rifle actions for competition and hunting.
25. Make a checklist and gather materials, to be evaluated by your instructor, of the tools and supplies you would want in a basic firearms maintenance tool kit.
26. Describe and demonstrate to your instructor the elements of proper trigger control. Be able to explain the importance of trigger control to marksmanship.
27. Describe and demonstrate to your instructor proper breath control. Why is it important to accurate shooting?
28. Demonstrate to your instructor how to determine "natural point of aim." What is it's importance to accurate shooting?
29. Design a logbook to record your progress as a marksman. Maintain this record for the duration of your project.
30. Show in your logbook that you are able to average 70 percent over three courses of fire. The course must be at least two positions as selected by your instructor.
31. Make a chart that compares the advantages and disadvantages of open iron, aperture and telescope sights for hunting and target shooting.
32. Demonstrate to your instructor that you can call your shots on a target by clock face location.
33. Describe and explain to your instructor "follow through" and why it is important to rifle shooting.
34. Demonstrate and describe for your instructor, the uses and advantages of a sling for hunting and target shooting.

Advanced Skills and Knowledge

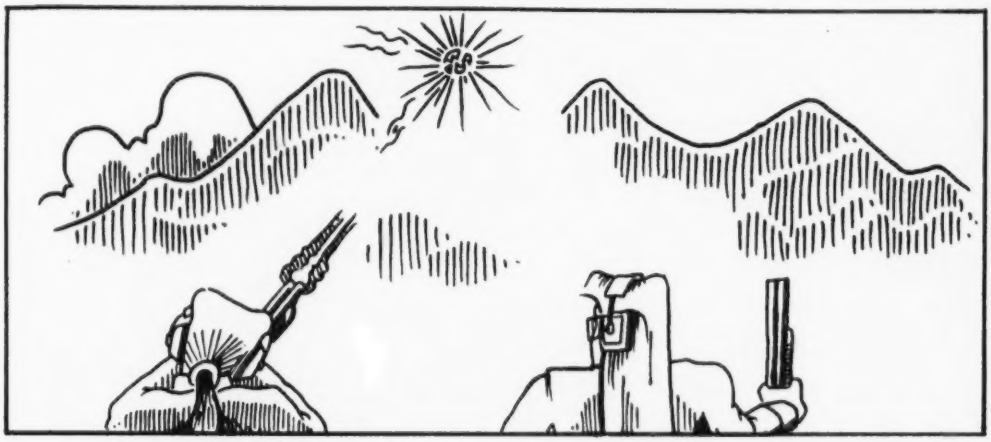
35. Make a chart that describes at least three types of airgun competition.
36. Attend a local rifle competition. Write a report on the shoot. If possible, illustrate your report with photographs.
37. Show in your shooting logbook that you are able to average 80 percent over six courses of fire. The course must be at least two positions as selected by your instructor.
38. Construct a kneeling roll for use in your shooting.
39. Make a chart that compares three rifle competition events. Include distances,target used, firearm restrictions and additional equipment needed.
40. Participate in a shoot that is not associated with your regular club activities. Write a report about the competition. Include details of how the shoot was conducted and your own performance.
41. Show in your shooting logbook that you are able to average 85 percent over 10 courses of fire. The courses must be at least two positions as selected by your instructor.
42. Construct a shooting jacket for use in your shooting.

Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Unit V.

SHOTGUN

What You Can Learn:
- *How to shoot trap*
- *How to shoot skeet*
- *How to select and care for a shotgun*
- *How to determine shotgun fit*



There are few activities more fun or exciting than shotgun shooting. It is fast,demanding and competitive. While it may look difficult, it is really no harder than pointing your finger! Anyone can develop the skill to be a good shot with a shotgun.

Both trap and skeet are International and Olympic sports, and there are many local, state and national events that draw students of all ages and skill levels. Hunting with shotguns is popular the world over and thought by many to be the finest sport to be found.

Student will be able to:

Basic Safety

1. Demonstrate correct, safe firearms handling techniques with shot guns, including muzzle control while passing a firearm to another person, casing and uncasing a firearm and placing and removing a firearm from a vehicle.
2. Demonstrate the location and the functional position of the safety on each of three different shot guns.
3. Safely determine that each of five action types of shot guns is unloaded.
4. Demonstrate how to determine the correct shells to use with two different shotguns.
5. Demonstrate four safe field carries with a shot gun.
6. Demonstrate two safe methods of crossing a fence (alone and with another person) with a shot gun.
7. Demonstrate basic firearm maintenance, cleaning and storage for a shot gun.
8. Obtain and use adequate eye and hearing protection. Explain the importance of this protection in shooting sports activities.
9. Demonstrate to your instructor the proper way to clean a shotgun.
10. Describe the major safety problems associated with mixing gauges of shotgun ammunition.
11. Explain to your instructor the difference between fluid and damascus steel shotgun barrels. Be able to describe the common method of identifying a damascus barrel.

Basic Skills and Knowledge

12. Identify and label the major parts of a shotgun on a line drawing, including:the muzzle, barrel, breech, chamber, receiver, bolt, trigger, trigger guard, safety, stock, forearm,butt of stock, comb of stock, and the group of parts called the action.
13. Clearly explain the sequence of events that take place inside a shot shell cartridge when it is fired.
14. Describe four major differences between a rifle and a shotgun.
15. Identify your master eye and explain the significance of shooting with both eyes open.
16. Define the term gauge and describe how it is measured.
17. Describe and demonstrate for your instructor the correct stance for shotgun shooting.
18. Keep a record of your shotgun activities.
19. Keep a record of your shotgun shooting for your logbook. Show that you are able to average 50 percent over two 25-target rounds, using a portable clay bird thrower or standard trap house.
20. Explain to your instructor what "follow through" is and why it is important in shotgun shooting.
21. Show in your shooting journal that you can average 80 percent success over at least four 25-target rounds using a portable clay bird

thrower or standard trap house.

22. Diagram and explain for your instructor the function of "choke." Be able to explain how to decide which choke to use in various situations.
23. Make a chart that compares the shotgun games of trap and skeet. Include the types of guns and chokes that would be desirable for each.
24. Explain to your instructor the function of a "rib" on a shotgun. Be able to describe the major types of rib and the advantages and disadvantages of each.
25. Explain to your instructor how gauge is determined. Be able to describe the historical method and its effect on modern shotgun use.
26. Explain to your instructor the elements of shotgun "fit" and how to determine proper shotgun fit.
27. Make a chart that describes the uses of the most commonly available shot sizes.
28. Pattern your shotgun. Describe the technique and your results.
29. Make a chart that describes shot pellet sizes and their uses. Give the criteria for choosing shot sizes and chokes for various field shooting situations.

Advanced Skills and Knowledge

30. Make a series of diagrams that shows each of the steps in reloading a shotgun shell.
31. Attend a registered trap shoot. Write a report on the shoot for your logbook. You may want to illustrate this article with photographs.
32. Show in your logbook that you are able to average 80 percent over at least 1225-target rounds using a portable clay bird thrower or standard trap house.

Master Skills and Knowledge

33. Write a report on the development of the clay target for shotgun shooting.
34. Write a report on the development of shotguns from flintlock muzzleloaders to the present.
35. Make a chart that compares the differences between domestic trap and skeet and international trap and skeet.
36. Make a chart that describes a "Sporting Clays" course. Explain its purpose and how it differs from other clay target sports.
37. Visit a "Sporting Clays" course in your area. If possible, shoot a standard round. Write a report about your experience.

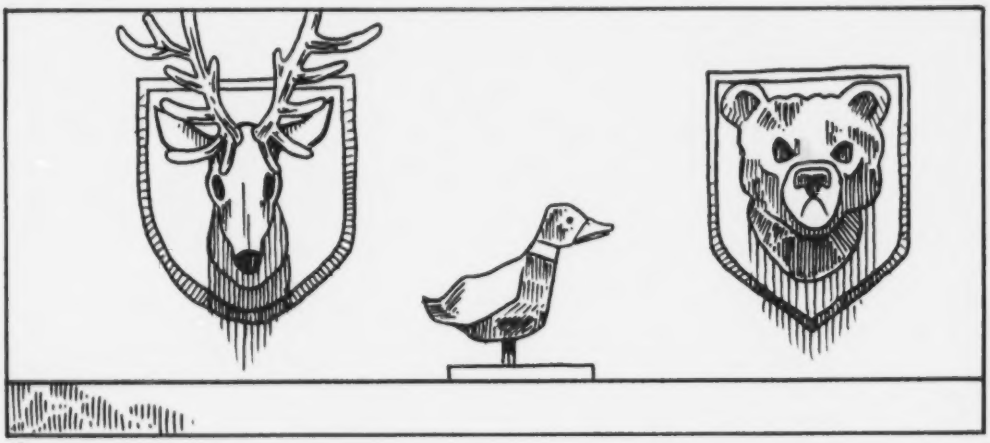
Instructor Reference

Advanced Hunter Education and Shooting Sports Responsibility Unit VII.

TAXIDERMY

What You Can Learn:

- *Care of animals for mounting*
- *How to mount a bird*
- *How to mount a small animal*
- *How to mount a big game head*
- *How to prepare skins for tanning*



Modern taxidermy is an interesting combination of science and art. It requires not only the mechanical skills but also the artistic ability to make a mounted skin look like a living animal. There is a great deal of pride in being able to take a mammal or bird you have bagged and mount it into a trophy. Taxidermy can be a lifelong hobby and there are many professional taxidermists today who serve the public or work in museums. You will find taxidermy to be a challenging project.

Students will be able to:

Basic Skills and Knowledge

1. Keep a record of your taxidermy activities.
2. Visit a local taxidermist. Make a list of the basic tools and supplies you need to start your project.
3. Make a checklist of books that you might find useful in your taxidermy project. Indicate any of these you might acquire.
4. Assemble the tools and supplies you need to mount a bird specimen. Indicate tools you have.
5. Write a report on the differences and similarities between preparing a scientific specimen and taxidermy.
6. Write an outline that describes the laws for acquiring specimens for taxidermy purposes. Include state and federal laws.
7. Obtain a bird to skin. Prepare the skin for mounting. Illustrate or photograph the process.
8. Prepare a mannequin for your bird skin. Illustrate or photograph the process.
9. Mount a bird skin. Illustrate the mounting process with photographs.
10. Make a diagram with instructions of the proper way to skin a small mammal for mounting. Include methods to preserve the skin until the mounting is done.
11. Obtain a small mammal to skin. Prepare the skin for mounting. Illustrate or photograph the process.
12. Obtain the necessary supplies to mount your skin. List what you need (if you make your own mannequin indicate this) to complete your mount.
13. Mount your small mammal skin. Illustrate the process with photographs.

Advanced Skills and Knowledge

14. Diagram the procedure of skinning a big game animal for a shoulder mount. Describe any measurements needed and methods to preserve the skin for taxidermy.
15. Skin and prepare a big game head for a shoulder mount. Illustrate your procedure with photographs.
16. Obtain the supplies necessary to mount your big game head.
17. Mount your big game head. Illustrate the process with photographs.
18. Make a chart that compares the processes of mounting a mammal and mounting a fish. Include problems of preservation.
19. Write a report that describes two methods for home tanning a deer or other hide.
20. Obtain and tan a hide. Photograph the process.

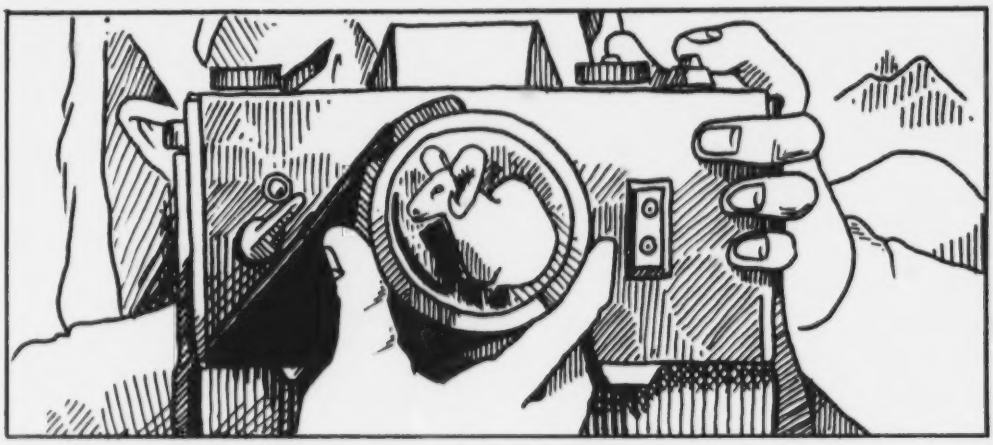
Master Skills and Knowledge

21. Obtain a fish specimen to mount. Skin the fish for mounting. Illustrate the process.
22. List and obtain the supplies you need to mount your fish.
23. Mount your fish. Illustrate the process with photographs.
24. Paint your fish. Illustrate the process with photographs.

WILDLIFE PHOTOGRAPHY

What You Can Learn:

- *Camera equipment suitable for wildlife photography*
- *Photograph composition*
- *How to use different films for outdoor photography*
- *How to take consistent photographs of wildlife*



Wildlife photography can be a challenging and rewarding complement to shooting sports. It is a hobby that can be enjoyed all year and can provide excellent preparation for the shooting season. It gives you the opportunity to stalk animals not ordinarily hunted and your "trophy" can provide pleasure and education to yourself and others for years. It can be a fulfilling hobby and a rewarding profession.

Students will be able to:

Basic Skills and Knowledge

1. Keep a record of your wildlife photography activities.
2. Visit a camera store or photographer. Write a list of the photographic and field equipment you need to start your Wildlife Photography project. Indicate any equipment you acquire.
3. Design a logbook to record the photographic information you will need to be able to evaluate your photography. Your log should include information on f-stop, shutter speed, film type and speed, camera type, lens type and any filter type used. Maintain this log for the duration of your project. Be sure to include the costs of film processing and printing, and any money you make from the sale of prints or transparencies.
4. Explain to your instructor the uses, advantages and disadvantages of three types of film (selected by your instructor) for the purposes of wildlife photography.
5. Make a chart that compares the advantages and disadvantages of 35mm cameras and larger format cameras for wildlife photography.
6. Select a local species of wildlife with your instructor. Make at least three photographs of that species. Be able to provide the technical data for each photograph.

Advanced Skills and Knowledge

7. Select a species of wildlife you want to photograph. Write a detailed outline of the equipment you need and at least two strategies you would use to photograph that species.
8. Make a chart that will help you choose the correct filters to use for various wildlife photography conditions.
9. Select a local species of wildlife with your instructor. Make a series of at least three photographs showing it in some natural activity. Be able to provide the technical data for each photograph.
10. Make a shoulder stock to mount the camera for use in your wildlife photography. Illustrate the process with photographs.
11. Make a chart that compares the advantages and disadvantages and uses of zoom, fixed focus and wide angle lenses.
12. Select one of your best wildlife photographs. Have the photograph enlarged at least two sizes. Write a critique of the enlargements. Discuss techniques you might use to enlarge your photographs.
13. Make a photographic study using a three-picture series, that illustrates depth of field, composition and use of light.
14. Take at least three photographs under the same conditions using different films or different filters. Write a critique in your logbook of the three photographs. Discuss the advantages and possible uses of each under wildlife photography conditions.
15. Make a photo essay to illustrate one of your other shooting sports activities.

BEST COPY AVAILABLE

16. Select one species of wildlife with your instructor that can be called. Call that species close enough to photograph clearly.
17. Select a species of nocturnal wildlife. Write an outline of strategies to photograph that species.
18. Photograph your nocturnal species. Write a critique of your technique.
19. Enter one or more of your photographs in a photography competition. Write a report on the competition. Include any critique of your work provided by the judges.
20. Visit a professional wildlife photographer. Take some of your photos for a critique. Record the comments.